



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

May 8, 2018

EA-18-030

Mr. Robert Craven
Plant General Manager
NextEra Energy Point Beach, LLC
6610 Nuclear Road
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2—NRC INTEGRATED INSPECTION REPORT 05000266/2018001 AND 05000301/2018001 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Craven:

On March 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Point Beach Nuclear Plant, Units 1 and 2. On April 11, 2018, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

A violation of the licensee's current site-specific licensing basis for tornado-generated missile protection was identified. Because this violation was identified during the discretion period covered by Enforcement Guidance Memorandum 15-002, "Enforcement Discretion for Tornado Missile Protection Noncompliance" and because the licensee was implementing compensatory measures, the NRC is exercising enforcement discretion by not issuing an enforcement action for the violation and allowing continued reactor operation.

Based on the results of this inspection, the NRC has identified three issues that were evaluated under the risk significance determination process as having very low safety significance (Green) in this report. Two of these findings involved violations of NRC requirements; one of these violations was determined to be Severity Level IV under the traditional enforcement process. Because the licensee initiated condition reports to address these issues, these violations are being treated as Non-Cited Violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy. These NCVs are described in the subject inspection report. Further, inspectors documented a licensee-identified violation, which was determined to be of very low safety significance in this report. The NRC is treating this violation as a NCV consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement; and the NRC Resident Inspector at the Point Beach Nuclear Plant.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; and the NRC Resident Inspector at the Point Beach Nuclear Plant.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA Karla Stoedter Acting for/

Jamnes L. Cameron, Chief
Branch 4
Division of Reactor Projects/Safety

Docket Nos. 50-266; 50-301; 72-005
License Nos. DPR-24 and DPR-27

Enclosure:
IR 05000266/2018; 05000301/2018

cc: Distribution via ListServ®

Letter to Robert Craven from James Cameron dated May 8, 2018

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2—NRC INTEGRATED INSPECTION REPORT 05000266/2018001 AND 05000301/2018001 AND EXERCISE OF ENFORCEMENT DISCRETION

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Jeremy Bowen
RidsNrrDorlLpl3
RidsNrrPMPointBeach
RidsNrrDirslrib Resource
Steven West
Darrell Roberts
Richard Skokowski
Allan Barker
DRPIII
DRSIII
ROPreports.Resource@nrc.gov

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|--------|-------------------------------|---------------------------|--|--|--|--|
| OFFICE | RIII | RIII | | | | |
| NAME | KLambert for RSkokowski:bw | KStoedter for JCameron | | | | |
| DATE | 5/7/2018 | 5/8/2018 | | | | |

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Numbers: 50-266; 50-301

License Numbers: DPR-24; DPR-27

Report Numbers: 05000266/2018; 05000301/2018

Enterprise Identifier: I-2018-001-0031

Licensee: NextEra Energy Point Beach, LLC

Facility: Point Beach Nuclear Plant, Units 1 and 2

Location: Two Rivers, WI

Dates: January 1 through March 31, 2018

Inspectors: T. Hartman, Senior Resident Inspector
K. Barclay, Resident Inspector
G. Edwards, Health Physicist
M. Holmberg, Senior Reactor Inspector

Approved by: J. Cameron, Chief
Branch 4
Division of Reactor Projects/Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring licensee’s performance by conducting an integrated quarterly inspection at Point Beach Nuclear Plant, Units 1 and 2, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC’s program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. NRC and self-revealed findings, violations, and additional items are summarized in the table below. Licensee-identified non-cited violations are documented in report sections: 71153—Follow-up of Events and Notices of Enforcement Discretion.

List of Findings and Violations

| Failure to Evaluate and Characterize Fire Protection Pipe Wall Degradation | | | |
|---|---|----------------------|--------------------------------|
| Cornerstone | Significance | Cross-Cutting Aspect | Report Section |
| Mitigating Systems | Green FIN 05000266/2018001–01; FIN 05000301/2018001–01 Open/Closed | P.2 – Evaluation | 71111.04 – Equipment Alignment |
| The inspectors identified a finding of very low significance, for the failure to follow procedure NP 7.7.22, “Service Water and Fire Protection Inspection Program.” Specifically, Section 4.10, Degraded Component Characterization and System Failure Analysis, step 4.10.1 states, in part, the extent of pipe wall degradation shall be characterized by volumetric non-destructive examination (NDE) for subsequent flaw evaluation. The licensee identified pipe corrosion on November 28, 2012, and failed to characterize it by volumetric NDE. | | | |

| Failure to Evaluate Material Acceptability for a Safety-Related Door | | | |
|---|---|----------------------|---|
| Cornerstone | Significance | Cross-Cutting Aspect | Report Section |
| Barrier Integrity | Green NCV 05000266/2018001–02; NCV 05000301/2018001–02 Open/Closed | None | 71153 – Follow-up of Events and Notices of Enforcement Discretion |
| A self-revealed Green finding and associated Non-Cited Violation of Title 10 of the <i>Code of Federal Regulations</i> (CFR) Part 50, Appendix B, Criterion III was identified when the licensee failed to evaluate the suitability of material prior to installation in the plant. Specifically, the licensee installed a doorstop, which was fabricated from a length of Unistrut, behind a safety-related door. The Unistrut was not suitable for the application and caused the door to become wedged open. | | | |

| Inadequate Basis for Deletion of TRM 3.4.3 — Primary System Integrity Requirements | | | |
|---|---|----------------------|---|
| Cornerstone | Significance | Cross-Cutting Aspect | Report Section |
| Initiating Events | Green Severity Level IV (Traditional Enforcement) NCV 05000266/2018001-03; NCV 05000301/2018001-03 Open/Closed | None | 71153 – Follow-up of Events and Notices of Enforcement Discretion |
| <p>The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR 50.59, “Changes, Tests, and Experiments,” and an associated finding of very low safety significance (Green) for failure to provide a written evaluation, which provided the basis for the determination that a change did not require a license amendment. Specifically, the licensee failed to provide a basis for why deletion of the nondestructive examination requirements in Technical Requirements Manual (TRM) 3.4.3 for Primary System Integrity did not require prior NRC approval.</p> | | | |

Additional Tracking Items

| Type | Issue Number | Title | Report Section | Status |
|------|-----------------------------------|---|----------------|--------|
| | EA-18-030 | Unanalyzed Condition for Tornado Generated Missiles | 71111.15 | Open |
| LER | 05000266, 05000301/2017-001-00 | Control Room Barrier Inadvertently Disabled | 71153 | Closed |
| LER | 05000266/2017-002-00 | Operation or Condition Prohibited by Technical Specifications | 71153 | Closed |
| LER | 05000266/2017-003-00 | Degraded Condition | 71153 | Closed |

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PLANT STATUS

Unit 1 operated at or near rated thermal power for the entire inspection period.

Unit 2 operated at or near rated thermal power for the entire inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515 Appendix D, "Plant Status" and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.04—Equipment Alignment

Partial Walkdown (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Unit 2 turbine-driven auxiliary feedwater pump on February 8, 2018;
- (2) Unit 2 train B safety injection pump on February 9, 2018;
- (3) G-04 emergency diesel generator on February 16, 2018; and
- (4) motor-driven fire protection pump on February 21, 2018.

71111.05AQ—Fire Protection Annual/Quarterly

Quarterly Inspection (5 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) Fire Zones 183, 184, and 185 on January 31, 2018;
- (2) Fire Zone 187 on January 31, 2018;
- (3) Fire Zones 215 and 217 on January 31, 2018;
- (4) Fire Zones 225 and 226 on March 27, 2018; and
- (5) Fire Zones 227 and 228 on March 27, 2018.

71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (1 Sample)

The inspectors observed and evaluated an as-found simulator scenario for an operating crew on February 5, 2018.

Operator Performance (1 Sample)

The inspectors observed and evaluated intergroup communications and command and control while multiple activities were occurring on March 14, 2018, and during Unit 2 control rod testing on March 15, 2018.

71111.12—Maintenance Effectiveness

Routine Maintenance Effectiveness (2 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) charging pumps fail to start due to ground faults on the variable frequency drive on March 13, 2018; and
- (2) K-2A instrument air compressor tripped on November 9, 2017.

71111.13—Maintenance Risk Assessments and Emergent Work Control (5 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Unit 2 elevated risk due to 2P-15A safety injection pump maintenance on January 16, 2018;
- (2) Unit 1 and Unit 2 elevated risk due to the service water ring header continuous flowpath being interrupted for backwash strainer maintenance on February 6, 2018;
- (3) Unit 1 and Unit 2 elevated risk due to K-2A instrument air compressor maintenance, service water pump P-32C and P-32E maintenance, and 2P-15A safety injection pump testing on February 9, 2018;
- (4) Unit 1 and 2 elevated risk due to G-02 emergency diesel generator maintenance from February 12-15, 2018; and
- (5) Unit 1 and 2 elevated risk due to P-35B diesel-driven fire protection pump maintenance from February 20-22, 2018.

71111.15—Operability Determinations and Functionality Assessments (5 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) steam leak on steam generator safety valve header vent line on January 3, 2018;
- (2) containment accident recirculation fan has abnormal temperature trend on January 5, 2018;

- (3) carbon steel valve inadvertently installed in extraction steam system on January 23, 2018;
- (4) pinhole leak identified on SW-2818B on March 14, 2018;
- (5) elevated temperature on G-03 emergency diesel generator lube oil engine inlet on March 27, 2018; and
- (6) unanalyzed condition for tornado generated missiles on March 1, 2018. (Partial Sample)

71111.18—Plant Modifications (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

- (1) EC 286412; Temporary Spent Fuel Pool Cooling During Implementation of EC 285583.

71111.19—Post Maintenance Testing (7 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) pressure and performance testing after replacement of the HX-013B spent fuel pool heat exchanger on February 2, 2018;
- (2) G-02 emergency diesel generator testing after maintenance on February 16-17, 2018;
- (3) P-35B diesel-driven fire protection pump testing after modification on February 21, 2018;
- (4) 1P-2B charging pump testing after maintenance on February 22, 2018;
- (5) D-106 battery testing after cell 20 replacement on February 28, 2018;
- (6) service water valve SW-LW-62 testing after refurbishment on March 14, 2018; and
- (7) auxiliary feedwater valve AF-4012 testing after diaphragm replacement on March 21, 2018.

71111.22—Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (3 Samples)

- (1) TS-5, Rod Exercise Test Unit 1, on January 24, 2018;
- (2) 2ICP 02.003B, Reactor Protection System Logic Train B 31 Day Surveillance Test, on February 22, 2018; and
- (3) IT 06 Train A, Train A Containment Spray Pump and Valves Unit 2, on March 14, 2018.

In-service (1 Sample)

- (1) IT 02 Train A, High Head Safety Injection Pumps and Valves Train A Unit 2, on February 9, 2018.

71114.06—Drill Evaluation

Emergency Planning Drill (1 Sample)

The inspectors observed emergency response operations in the Simulator Control Room and the Technical Support Center on January 23, 2018.

RADIATION SAFETY

71124.05—Radiation Monitoring Instrumentation

Walk Downs and Observations (1 Sample)

The inspectors evaluated radiation monitoring instrumentation during plant walkdowns.

Calibration and Testing Program (1 Sample)

The inspectors evaluated the licensee's calibration and testing program.

OTHER ACTIVITIES—BASELINE

71151—Performance Indicator Verification (6 Samples)

The inspectors verified licensee performance indicators submittals listed below:

- (1) IE01: Unplanned Scrams per 7000 Critical Hours (2 Samples)
(January 1–December 31, 2017);
- (2) IE03: Unplanned Power Changes per 7000 Critical Hours (2 Samples)
(January 1–December 31, 2017); and
- (3) IE04: Unplanned Scrams with Complications (USwC) (2 Samples)
(January 1–December 31, 2017).

71152—Problem Identification and Resolution

Annual Follow-Up of Selected Issues (2 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) AR 2246485, Potential Work Hour Rule Violation in DZ Projects; and
- (2) AR 2254843, IA-1917, 1924, 1925 Valves with AL Handles in U1 Containment.

71153—Follow-Up of Events and Notices of Enforcement Discretion

Licensee Event Reports (3 Samples)

The inspectors evaluated the following licensee event reports, which can be accessed at <https://lersearch.inl.gov/LERSearchCriteria.aspx>:

- (1) Licensee Event Report 05000266/2017-001-00, Control Room Barrier Inadvertently Disabled, on November 16, 2017;
- (2) Licensee Event Report 05000266/2017-002-00, Operation or Condition Prohibited by Technical Specifications, on December 13, 2017; and
- (3) Licensee Event Report 05000266/2017-003-00, Degraded Condition, on December 13, 2017.

INSPECTION RESULTS

71111.04—Equipment Alignment

| Failure To Evaluate and Characterize Fire Protection Pipe Wall Degradation | | | |
|---|--|----------------------|--------------------------------|
| Cornerstone | Significance | Cross-cutting Aspect | Report Section |
| Mitigating Systems | Green Finding FIN 05000266/2018001-01; FIN 05000301/2018001-01; Open/Closed | P.2 – Evaluation | 71111.04 – Equipment Alignment |
| <p>The inspectors identified a finding of very low significance, for the failure to follow procedure NP 7.7.22, “Service Water and Fire Protection Inspection Program.” Specifically, Section 4.10, Degraded Component Characterization and System Failure Analysis, step 4.10.1 states, in part, the extent of pipe wall degradation shall be characterized by volumetric NDE [non-destructive examination] for subsequent flaw evaluation. The licensee identified pipe corrosion on November 28, 2012, and failed to characterize it by volumetric NDE.</p> | | | |
| <p><u>Description:</u></p> <p>On March 2, 2018, while inspecting the fire protection (FP) system, the inspectors identified corrosion on the FP loop header in the circulating water pump house (CWPH). The CWPH contains the FP pumps, which supply FP water to the various buildings and transformer deluge systems onsite. The FP water is distributed through an underground header that forms a loop around the station. The loop headers enter the CWPH underground on the north and south ends of the building and travel upward through rectangular concrete pits in the floor. The pits, which allow for access and visual inspection of fire protection header, are approximately 3.25 feet wide, 2.5 feet long, and 8 feet deep.</p> <p>The inspectors observed that either ground water or leakage from piping joints had filled the pipe pit approximately half full of water. It appeared that the water level had been allowed to fluctuate throughout the years and the FP header, which had been exposed to numerous cycles of wetting and drying in the presence of oxygen, had an 18 inch band of corrosion around the entire circumference of the pipe.</p> | | | |

The inspectors' review of the CAP found that a fire protection engineer had identified the corrosion in 2012 and documented it in condition report AR 01827881 titled, "Fire Header Piping is Submerged and Corroded." The recommended actions documented in the AR stated, "There is presently no evidence of leakage or failure. However, the piping should undergo non-destructive examination, such as UT [Ultrasonic Testing], to confirm its integrity. Following examination, the piping should be cleaned and coated for long-term corrosion protection." The inspectors' reviewed the related corrective actions and found that work order (WO) 40199204 had remained open for over five years and the work had not been performed.

The inspectors reviewed NP 7.7.22, Section 2.4, which stated, in part, inspection of FP system piping is required in order to meet commitments to the NRC to manage the effects of aging for SSC's within the scope of License Renewal. LR-AMP-010-FP, "Fire Protection Program Basis Document for License Renewal," credited NP 7.7.22 with inspecting a representative sample of fire protection system pipe segments for loss of material (wall thinning).

The NP 7.7.22, Section 4.6, Selection of Examination Locations, Step 4.6.1, states, the SW ISI Coordinator selects examination locations based upon the following criteria with input from the SW and FP engineer.

Criteria (a) through (e), were related to locations with previous wall thickness measurements and known flow blockage concerns. Criteria f, states, in part, additional first time or repetitive inspections shall be chosen based on system walkdown with system engineering input. These inspection locations are selected with emphasis on selecting locations in the most important (i.e. highest risk) piping sections of the system at the following problems areas:

- Exterior Corrosion Examples:
 - (a) Underneath insulation where water collects; and
 - (b) Low points where external moisture is evident from valve packing, condensation, etc.

The NP 7.7.22, Section 4.10, Degraded Component Characterization and System Failure Analysis, Step 4.10.1, stated, in part, the extent of pipe wall degradation shall be characterized by volumetric NDE for subsequent flaw evaluation. The inspectors identified that the licensee failed to perform volumetric NDE on the FP pipe corrosion after it was identified in 2012.

Corrective Actions: The licensee pumped the water down in the floor pits to allow engineering to enter and make an assessment of the degradation. Engineering was not permitted to remove the corrosion from the pipe, but performed circumferential measurements of the pipe to make a general assessment. The licensee's conclusions were that the wall thinning was not excessive and the pipe was near its nominal measurements. The licensee's future corrective action plans include: cleaning the surface of the pipe, performing volumetric NDE on that portion of pipe, and properly coating the pipe to prevent further corrosion.

Corrective Action Reference: AR 02252399

Performance Assessment:

Performance Deficiency: The licensee failed to follow procedure NP 7.7.22, Step 4.10.1, which required pipe wall degradation to be characterized by volumetric NDE for subsequent flaw evaluation.

Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, if the corrosion was allowed to continue, the integrity of the FP pipe could be compromised.

Significance: The inspectors assessed the significance of the finding using the SDP. The finding affected the Mitigating Systems Cornerstone and was screened in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process," Attachment 1, "Fire Protection Significance Determination Process Worksheet." The finding was assigned to the Fire Water Supply category. The corrosion did not cause a loss of function of the fire protection header and the inspectors concluded that the finding did not affect the ability to achieve safe shutdown (Question A from Task 1.3.1). The finding screened as having very low safety significance (Green).

Cross-cutting Aspect: The finding had a Cross-Cutting aspect in the Evaluation component of the Problem Identification and Resolution Cross-Cutting area, which requires the licensee to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with safety significance. Specifically, the licensee failed to evaluate the extent of pipe corrosion and assess the safety significance. (P.2)

Enforcement:

Inspectors did not identify a violation of regulatory requirements associated with this finding.

71111.15—Operability Determinations and Functionality Assessments

| | | |
|------------------------|--|-------------------------------------|
| Enforcement Discretion | Enforcement Action: EA-18-030: Unanalyzed Condition for Tornado Generated Missiles | 71111.15 Operability Determinations |
|------------------------|--|-------------------------------------|

Description:

On June 10, 2015, the NRC issued Regulatory Issue Summary (RIS) 2015-06, "Tornado Missile Protection" (ML15020A419), focusing on the requirements regarding tornado-generated missile protection and required compliance with the facility-specific licensing basis. The RIS also provided examples of noncompliance that had been identified through different mechanisms and referenced Enforcement Guidance Memorandum (EGM) 15-002, "Enforcement Discretion For Tornado Generated Missile Protection Non-Compliance," which was also issued on June 10, 2015, (ML15111A269) and revised on February 7, 2017, (ML16355A286). The EGM applies specifically to an SSC that is determined to be inoperable for tornado generated missile protection. The EGM stated that a bounding risk analysis performed for this issue concluded that tornado missile scenarios do not represent an immediate safety concern because their risk is within the LIC-504, "Integrated Risk-Informed Decision-Making Process for Emergent Issues," risk acceptance guidelines. In the case of

Point Beach, the EGM provided for enforcement discretion of up to three years from the original date of issuance of the EGM.

The EGM allowed NRC staff to exercise this enforcement discretion only when a licensee implements, prior to the expiration of the time mandated by the LCO, initial compensatory measures that provided additional protection such that the likelihood of tornado missile effects were lessened. In addition, licensees were expected to follow these initial compensatory measures with more comprehensive compensatory measures within approximately 60 days of issue discovery. The comprehensive measures should remain in place until permanent repairs are completed, or until the NRC dispositions the non-compliance in accordance with a method acceptable to the NRC such that discretion is no longer needed.

Table 1.3–1 of the Point Beach Final Safety Analysis Report (FSAR) states in part that SSCs which are essential to the prevention and mitigation of nuclear accidents shall be designed, fabricated, and erected to withstand the forces that might reasonably be imposed by the occurrence of an extraordinary natural phenomenon such as a tornado. On March 1, 2018, the licensee initiated AR 02252240, identifying a nonconforming condition of Table 1.3–1. Specifically, on both units 1 and 2, the steam supply lines and exhaust stacks for the turbine-driven auxiliary feedwater pumps, the main steam isolation valves, the atmospheric steam dumps, the main steam safety valves, and the vents for T–175B bulk fuel oil storage tank were not adequately protected from tornado-generated missiles. The licensee declared the affected SSCs inoperable and promptly implemented compensatory measures designed to reduce the likelihood of tornado-generated missile effects.

The condition was reported to the NRC as Event Notice (EN) 53239 as an unanalyzed condition and potential loss of safety function.

Corrective Actions: The licensee documented the inoperability of the SSCs and the affected TS LCO conditions in the CAP and in the control room operating log. The shift manager notified the NRC resident inspector of implementation of EGM 15–002, and documented the implementation of the compensatory measures to establish the SSCs “operable but nonconforming” prior to expiration of the LCO required action.

The licensee’s immediate compensatory measures included:

- review and revision of procedures for a tornado watch and a tornado warning to provide additional instructions for operators preparing for tornados and/or high winds, and a potential loss of SSCs vulnerable to the tornado missiles;
- confirmation of readiness of equipment and procedures dedicated to the Diverse and Flexible Coping Strategy (FLEX);
- verification that training was up to date for individuals responsible for implementing preparation and response procedures; and
- establishment of a heightened station awareness and preparedness relative to identified tornado missile vulnerabilities.

Corrective Action Reference: AR 2252240

Enforcement:

Violation: The enforcement discretion was applied to the required shutdown actions of the following TS LCOs for both units:

- TS 3.0.3, General Shutdown LCO (cascading or by reference from other LCOs);
- TS 3.7.1, Main Steam Safety Valves (MSSVs);
- TS 3.7.2, Main Steam Isolation Valves (MSIVs) and Non-Return Check Valves;
- TS 3.7.4, Atmospheric Dump Valve (ADV) Flowpaths;
- TS 3.7.5, Auxiliary Feedwater (AFW);
- TS 3.8.1; AC Sources - Operating; and
- TS 3.8.3, Diesel Fuel Oil and Starting Air.

Severity/Significance: The subject of this enforcement discretion, associated with tornado missile protection deficiencies was determined to be less than red (i.e., high safety significance) based on a generic and bounding risk evaluation performed by the NRC in support of the resolution of tornado-generated missile non-compliances. The bounding risk evaluation is discussed in Enforcement Guidance Memorandum 15–002, Revision 1, “Enforcement Discretion for Tornado-Generated Missile Protection Non-Compliance,” and can be found in ADAMS Accession No. ML16355A286.

Basis for Discretion: The NRC exercised enforcement discretion in accordance with Section 2.3.9 of the Enforcement Policy and EGM 15-002 because the licensee initiated initial compensatory measures that provided additional protection such that the likelihood of tornado missile effects were lessened. The licensee implemented actions to track the more comprehensive actions to resolve the nonconforming conditions within the required 60 days. These comprehensive actions are to remain in place until permanent repairs are completed, which for Point Beach were required to be completed by June 10, 2018, or until the NRC dispositioned the non-compliance in accordance with a method acceptable to the NRC such that discretion was no longer needed.

71153—Follow-Up of Events and Notices of Enforcement Discretion

| Failure to Evaluate Material Acceptability for a Safety-Related Doorstop | | | |
|--|---|----------------------|---|
| Cornerstone | Significance | Cross-cutting Aspect | Report Section |
| Barrier Integrity | Green NCV 05000266/2018001–02; NCV 05000301/2018001–02 Open/Closed | None | 71153 – Follow-up of Events and Notices of Enforcement Discretion |

Introduction: A self-revealed Green finding and associated Non-cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III was identified when the licensee failed to evaluate the suitability of material prior to installation in the plant. Specifically, the licensee installed a doorstop, which was fabricated from a length of Unistrut, behind a safety-related door. The Unistrut was not suitable for the application and caused the door to become wedged open.

Description:

At 1724 on September 18, 2017, while an individual was accessing the main control room through Door-061, South Control Room Door, the door became stuck on the doorstop installed on the floor. The differential pressure across the door was higher than normal due to ventilation testing that was occurring. This caused the door to swing open rapidly and engage the doorstop. The doorstop was made from Unistrut which, when struck by the door, bent allowing the door to travel over the top of the leading edge of the doorstop. The doorstop then prevented the door from closing.

Door-061 is the alternate door to the main control room and is not the normal door for ingress/egress. However, it is frequently used to access the control room. Door-061 is classified as a fire protection, high-energy line break, flooding, and safe shutdown barrier. Additionally it makes up part of the control room envelope for protection against external environmental conditions and is a vital area boundary.

A review of the event determined the Unistrut was installed in 2011 under a minor maintenance work request because of a possible pinch hazard between the handle and the wall behind the door. A review of MA-AA-201, Minor Maintenance Process, as it existed in 2011, would not have allowed this doorstop to be installed under that process. The minor maintenance process specifically discussed repair or replacement of already installed equipment.

Corrective Actions: The licensee immediately declared the door, the control room boundary, and the control room emergency ventilation systems inoperable. At 1750, they removed the Unistrut from under the door, which allowed the door to close and restore operability. The licensee ultimately replaced the doorstop with a more robust design.

Corrective Action Reference: AR 2225525

Performance Assessment:

Performance Deficiency: The inspectors determined the installation of the Unistrut behind Door-61, a safety-related door, as a doorstop under the minor maintenance process was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it adversely affected the SSC and Barrier Performance attribute of the Barrier Integrity Cornerstone to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, loss of the control room barrier affects the ability to protect the control room operators from radionuclides and respond to any plant events.

Significance: The inspectors assessed the significance of the finding using the SDP. "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3 – Barrier Integrity Screening Questions, dated June 19, 2012. The inspectors answered "No" to Question C.1 and "Yes" to question C.2 of Exhibit 3 of Appendix A of IMC 609 because the affected door has multiple protective functions and was degraded against protection from smoke or toxic atmosphere. Therefore, the inspectors determined that a detailed risk evaluation by a Senior Reactor Analyst was required. The analyst calculated the increase in core damage frequency based on the exposure time (0.5 hours) and the likelihood of a main steam line break outside of containment (1E-2/year). The main steam line break was determined to be the most limiting accident in terms of initiating event frequency amongst all initiators, e.g., toxic gas, fires, etc. It was assumed that all main steam line breaks would result in a loss of control room habitability and that the CCDP for control room evacuation was 1.0. These were conservative and bounding assumptions and represented additional margin to the green/white threshold. The change in CDF was 5E-7/year and therefore this performance deficiency should be treated as a Green issue.

Cross-cutting Aspect: This finding did not have a cross cutting aspect because the performance deficiency was not indicative of current licensee performance.

Enforcement:

Violation: Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components.

Contrary to the above, on December 12, 2011, the licensee failed to review for suitability of application of materials essential to the safety-related functions of Door-061, South Control Room Door. Specifically, the licensee installed a piece of Unistrut on the floor behind Door-61 to act as a doorstop that was not adequate to take the forces when the door swung open rapidly, which caused the door to become wedged open.

Disposition: This violation is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the Enforcement Policy.

| | |
|---|---|
| Licensee Identified Non-Cited Violation | 71153 – Follow-Up of Events and Notices of Enforcement Discretion |
| This violation of very low safety significance was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the Enforcement Policy. | |
| <p>Violation: Technical Specification (TS) 3.0.4 states in part that entry into a MODE or other specified condition in the Applicability of a limiting condition for operation (LCO) shall only be made when the LCO's Surveillances have been met..." TS 3.7.5 Auxiliary Feedwater (AFW) Limiting Condition SR 3.7.5.1 required in part "Verify each AFW manual, power operated, and automatic valve in each water path, and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position."</p> <p>Contrary to the above, at 1500 on October 29, 2017, Unit 1 entered MODE 3 and the licensee failed to verify that AFW (System required for MODE 3) turbine driven (TD) AFW steam supply valves 1MS-235 and 1MS-237 were in the correct (open) position. These valves were in fact shut rendering the TDAFW pump inoperable until the licensee identified this error and opened these valves at 1610 on October 29, 2017 (reference; Licensee Event Report 05000266/2017-002-00, Operation or Condition Prohibited by Technical Specifications).</p> <p>Significance/Severity: This licensee identified finding, affected the Mitigating Systems Cornerstone and was screened in accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At Power," issued June 19, 2012. Because of the short duration (~1 hour) that the TDAFW pump was not operable, the inspectors determined that this finding is of very low safety significance (Green) because: the performance deficiency was not a design or qualification issue; it did not represent a loss of the system function; the train was neither inoperable for greater than its allowed outage time nor was it inoperable for greater than 24 hours; and was not part of an external event mitigating system.</p> <p>Corrective Action Reference: AR 02233500 "Made Mode Change With Inoperable TDAFW"</p> | |

| Inadequate Basis for Deletion of TRM 3.4.3 — Primary System Integrity Requirements | | | |
|---|---|----------------------|---|
| Cornerstone | Significance/Severity | Cross-Cutting Aspect | Report Section |
| Initiating Events | Green Severity Level IV (Traditional Enforcement) NCV 05000266/2018001–03: NCV 05000301/2018001–03 Open/Closed | None | 71153 – Follow-Up of Events and Notices of Enforcement Discretion |
| <p>The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR 50.59, “Changes, Tests, and Experiments,” and an associated finding of very low safety significance (Green) for failure to provide a written evaluation which provided the basis for the determination that a change did not require a license amendment. Specifically, the licensee failed to provide a basis for why deletion of the nondestructive examination requirements in Technical Requirements Manual (TRM) 3.4.3 for Primary System Integrity did not require prior NRC approval.</p> | | | |
| <p><u>Description:</u></p> <p>Technical Requirements Manual (TRM) 3.4.3 Primary System Integrity contained three surveillance requirements to confirm the primary system integrity prior to restart following modifications and repairs. TSR 3.4.3.1 required a leak test of the primary system, TSR 3.4.3.2 required a surface examination of new welds, and TSR 3.4.3.3 required 100 percent volumetric non-destructive examination of new welds for pipe greater than 2 inches in diameter. In 2003, the licensee removed TRM 3.4.3 from the TRM based upon a 10 CFR 50.59 Screening (SCR) 2002–0465 “Primary System Integrity.” In SCR 2002–0465, the licensee determined that removal of these requirements did not adversely affect the design function of a system structure or component (SSC) credited in the safety analysis. The basis for this conclusion was that the current NRC requirements per 10 CFR 50.55a govern repairs and replacements to Class 1 components, which invokes the American Society of Mechanical Engineers (ASME) Section XI requirements. Specifically: 1) TSR 3.4.3.1 pressure test requirement would be met by ASME Section XI requirement to perform a system leakage test at normal operating pressure following each refueling outage; 2) TSR 3.4.3.2 requirement to perform surface examinations of new welds would be met by the ASME Section XI requirement to perform surface examinations on all new Class 1 welds; 3) TSR 3.4.3.3 requirement to perform volumetric examinations on all new welds is not necessary. The requirements specified by ASME Section XI are acceptable to verify the integrity of new welds in the primary system which requires volumetric examination of welds for piping that is 4 inch NPS and larger. Additionally, the licensee concluded that there was no benefit for doing requirements above and beyond that in the ASME Code.</p> <p>Volumetric examination of a new weld can identify weld flaws that are not revealed by a surface examination or pressure test and without a volumetric examination, rejectable weld flaws may be left in service which can progress to a pipe break/failure that results in a leak or loss of coolant accident (LOCA). For example, in March of 2013, a 2-inch diameter reactor head vent line failed at the Quad Cities Nuclear Power Station Unit 1 due to a weld defect that was not detected by pressure test or surface examinations (reference LER 05000254/2013003 – 00, Reactor Vessel Head Vent Line Leak Due to Weld Defect). After deletion of TRM 3.4.3, new pipe welds in primary piping under 4 inches in diameter were no longer subjected to volumetric examination and the licensee had not provided a basis for why</p> | | | |

this change did not adversely affect the design functions of the reactor coolant system (RCS) in Unit 1 and 2. Because the licensee failed to recognize this change had potential adverse effects on the RCS, no evaluation was completed as required by 10 CFR 50.59 to demonstrate why this change did not require prior NRC approval (e.g. a license amendment). Specifically, the licensee had not provided a basis for why the deletion of volumetric examination of new welds in the RCS pipe systems 4 inch diameter and less did not:

- 1) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the final safety analysis report (e.g. LOCA); and
- 2) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a SSC important to safety (e.g. RCS) previously evaluated in the final safety analysis report.

Corrective Actions: The licensee concluded that this issue did not constitute a new degraded or unanalyzed condition involving a SSC that is either required to be OPERABLE per Technical Specifications or required to perform a support function for such SSCs. Therefore, the licensee concluded that an OPERABILITY determination was not required and entered this issue into the corrective action program.

Corrective Action Reference: AR 02248575, TRM 3.4.3, Primary System Integrity Cancellation/Deletion.

Performance Assessment:

Performance Deficiency: The inspectors determined that failure to provide a written evaluation which provided the basis for the determination that a change did not require a license amendment was contrary to 10 CFR 50.59(d)(1) and was a performance deficiency. Specifically, the licensee failed to provide a basis for why a change to delete TRM 3.4.3 Primary System Integrity and associated volumetric weld examinations of new piping welds did not require prior NRC approval.

Screening: The inspectors determined the performance deficiency was more than minor because it adversely affected the Initiating Events Cornerstone Attribute of Equipment Performance with the objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, by deleting volumetric examination of pipe welds the licensee potentially affected the reliability of the RCS system and potentially increased the likelihood for a LOCA.

Significance: The inspectors assessed the significance of the finding using SDP Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 1 - Initiating Events Screening Questions, dated June 19, 2012. The inspectors answered "No" to each of these Question of Exhibit 1 of Appendix A of IMC 609 because the Point Beach Units had not yet experienced a failure of RCS piping attributed to a weld flaw in RCS small bore piping. Therefore, the inspectors determined that this finding is of very low safety significance (Green).

Cross-cutting Aspect: The associated finding was not reflective of current licensee performance so there was no cross cutting aspect associated with this finding. Additionally, the violation was assessed under the Traditional Enforcement process, so there was no cross cutting aspect associated with this violation.

Enforcement:

The reactor oversight process (ROP) significance determination process (SDP) does not specifically consider the regulatory process impact in its assessment of licensee performance.

Specifically, violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process instead of the SDP because they are considered to be violations that potentially impede or impact the regulatory process. Therefore, it is necessary to address this violation using traditional enforcement to adequately deter non-compliance.

Violation: Title 10 CFR Part 50.59, "Changes, Tests, and Experiments," Section (d)(1) states in part "The licensee shall maintain records of changes in the facility, of changes in procedures, and of tests and experiments made pursuant to paragraph (c) of this section. These records must include a written evaluation which provides the bases for the determination that the change, test, or experiment does not require a license amendment pursuant to paragraph (c)(2) of this section." And Title 10 CFR 50.59(c)(2) states in part "A licensee shall obtain a license amendment pursuant to Sec. 50.90 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: (i) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the final safety analysis report (as updated); (ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the final safety analysis report (as updated);.."

Contrary to the above, from April 25 of 2003 and as of February 9, 2018, the licensee failed to maintain a written evaluation which provided the basis for determining that a change, test, or experiment made pursuant to 10 CFR 50.59(c)(2) did not require a license amendment. Specifically, the licensee failed to provide a written evaluation with the basis for why a change (deletion of TRM 3.4.3 Primary System Integrity requirements) from the TRM did not result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the final safety analysis report and/or result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety.

Severity: Severity Level IV. In accordance with section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (i.e., green finding).

Disposition: This violation is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors confirmed that proprietary information was controlled to protect from public disclosure. No proprietary information was documented in this report.

- On March 1, 2018, the inspectors presented the radiation protection inspection results to Mr. R. Craven, Plant General Manager, and other members of the licensee staff.
- On April 11, 2018, the inspectors presented the quarterly integrated inspection results to Mr. R. Craven, and other members of the licensee staff.

DOCUMENTS REVIEWED

71111.04—Equipment Alignment

- AR 01994587; No Progress on G05/X04 Fire Exposure Protection (2nd AR)

- AR 02220564; 2Q17 Site SER: Plant Status Control Effectiveness Review
- AR 02223897; 50 Year Sprinkler Head Testing
- AR 02232520; RF-440 Slider Found Shut When Should Be Open
- AR 02236638; Licensing Early Warning Signs, Oct, Configuration Management
- AR 02237795; PB0 FP-03707 Drain Low Points of X-04/G-05 Fire Suppression
- AR 02238962; Air Amplifiers Isolated to 2T-212, 2P-29 Mini Recirc Accum
- AR 02239321; Formal Escalation of PBN Operations Performance
- AR 1827881; Fire Header Piping is Submerged and Corroded
- AR 1978931; Questionable Scheduling of Flooding Related Item (FP)
- AR 2040212; Piping KB-01 – UT Inspection of FP System Piping
- AR 2252399; NRC ID: Corrosion Downstream of FP-33 and FP-36 Header Iso. Valves
- CL 10D; Fuel Oil Systems; Revision 24
- CL 11A G-04; G-04 Diesel Generator Checklist; Revision 11
- CL 13E Part 1; Auxiliary Feedwater Valve Lineup Turbine-Driven Unit 2; Revision 30
- CL 19; Fire Protection System Valves; Revision 53
- Drawing 110E035, Sheet 1, Revision 56 and Sheet 2; Revision 59
- Drawing B-17 Job 3688; Circ Water Pump House Sections and Details; Revision 6
- Drawing B-4; Circ Water Pump House North Plan EL 7FT; Revision 17
- Drawing B-5; Circ Water Pump House South Plan EL 7FT; Revision 20
- Drawing M-208, Sheet 1; Fire Water; Revision 48
- Drawing M-208, Sheet 15; Fire Protection System Diesel Generator Building; Revision 14
- Drawing M-208, Sheet 2; Fire Protection Water; Revision 41
- Drawing M-208, Sheet 4; Fire Protec./Sprinkler Sys.; Revision 25
- Drawing M-209, Sheet 15; Starting Air System Diesel Generator Building; Revision 13
- Drawing M-217, Sheet 1; Auxiliary Feedwater System; Revision 104
- Drawing M-219, Sheet 3; Diesel Generator Building; Revision 17
- ER-AA-204-2006-10001; Equipment Reliability; Revision 4
- LR-AMP-010-FP; Fire Protection Program Basis Document For License Renewal; Revision 8
- LR-AMR-114, LR-21; Fire Protection, Aging Effects Analysis, Assets, and Aging Management Activities, Attachment 8.3; February 3, 2004
- LR-AMR-114, LR-21; Fire Protection, Components Requiring Aging Management Review, Attachment 8.1; February 3, 2004
- LR-AMR-114, LR-21, Fire Protection; Components Requiring Aging Management Review; Attachment 8.5; February 3, 2004
- LR-TR-505-QAPELE; Evaluation of Quality Assurance Program Elements For License Renewal; Revision 5
- LR-TR-519; One-Time Inspection Program Sampling Methodology; Revision 3
- NP 7.7.22; Service Water and Fire Protection Inspection Program; Revision 8
- PB-AT-004a – Action Request Word & Keyword Search; MISPO-MISPOSITIONING, MISPOS1 – MISPOSITION LEVEL 1, MISPOS2 – MISPOSITION LEVEL 2, MISPOS3 – MISPOSITION LEVEL 3, MISPOS4 – MISPOSITION LEVEL 4, MISPOS5 – MISPOSITION LEVEL 5; 10/01/2017–03/14/2018
- PB-AT-004a – Action Request Word & Keyword Search; STATC – STATUS CONTROL; 10/01/2017–03/14/2018
- PI-AA-100-1008; Condition Evaluation; Revision 2
- PI-AA-204; Condition Identification and Screening Process; Revisions 14 and 18
- PI-AA-205; Condition Evaluation and Corrective Action; Revisions 14 and 18
- Point Beach Nuclear Plant Fire Protection Evaluation Report; Revision 17
- WM-AA-201; Work Order Identification, Screening and Validation Process; Revision 10
- WO 40199204-01; Piping KB-01 / Fire Header Piping is Submerged and Corroded

71111.05AQ—Fire Protection Annual/Quarterly

- PFP-0-PAB 26; Pre-Fire Plan Unit 1 & Unit 2 Auxiliary Building 26 ft; Revision 0
- NP 1.9.14; Fire Protection Plan; Revision 19
- AR 2256819; Door-483 & 486 Were Non-Functional on 3/27, Repairs Made
- OM 3.27; Control of Fire Protection and NFPA 805 Equipment; Revision 67

71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

- 1ICP 02.001YL; Reactor Protection and Engineered Safety Features Yellow Channel Analog 92 Day Surveillance Test; Revision 19
- 2ICP 06.083; Secondary Control Valves Instrumentation 18 Month On-line Calibration; Revision 12
- 2ICP 13.004A; Spec 200, Reactor Vessel Level and Subcooling Post Accident Monitoring Instruments 18 Month; Revision 16
- AR 2254161; Switch is Very Sticky When Going to Pull-To-Lock
- IT 06 Train A; Train A Containment Spray Pump and Valves Unit 2; Revision 5
- OP 9C Unit 2; Containment Venting and Purging Unit 2; Revision 14
- OP-AA-100-1000; Conduct of Operations; Revisions 22 and 24
- PBN LOC 18A 001E; CPE Short Evaluation; Revision 1
- TS 6; Rod Exercise Test Unit 2; Revision 35
- WO 40589598-01; Measure Unit 1 Yellow Channel RTDs at 100% Power; Revision 0
- WO 40590524-01; 1TD-00408C/U1 Yellow Setpoint 2 Within 3 Degrees of dT; Revision 0

71111.12—Maintenance Effectiveness

- AR 2149954; K-002A Secondary Discharge Valve Found Degraded
- AR 2225415; 1-812/A01 As Found Time Setting OOT Low
- AR 2232573; Instrument Power Issue in 1C-110
- AR 2235500; K-2A IA Compressor Tripped on Overpressure – PWE
- AR 2235889; U1 'A' Charging Pump Trip on Ground Fault (PWE)
- AR 2242421; Ground Fault on 1P-2C VFD When Trying to Start
- AR 2243140; 2W-1B1 Potentially Has Backflow Based on Temp
- AR 2244457; 1X-03 Planned Unavailability Exceeded Maintenance Rule
- AR 2247555; 1-276/A06 As Found Pickup and Dropout Settings OOT Low
- AR Search Report; Eq Component Tag: K-002A A UNLDR, K-002B A UNLDR, K-002B OUT VLV, K-002A OUT VLV; 03/20/2010–03/20/2018
- AR Search Report; Eq Component Tag: K-002A, K-002B, K-003B, K-003A; 03/20/2010–03/20/2018
- AR Search Report; Maintenance Rule Functional Failures; 01/18/2018–03/09/2018
- AR Search Report; Maintenance Rule Functional Failures; 09/01/2017–01/18/2018
- AR Search Report; Maintenance Rule; 10/21/2017–03/21/2018
- WO 40484374-01; K-2A Intercooler Pressure High
- WO 40546339-01; IA-06332A-S, Replace Solenoid Valve
- WO 40569972-01; K-2A IA Compressor Tripped on Overpressure

71111.13—Maintenance Risk Assessments and Emergent Work Control

- AR 2248214; Scaffold for SW-2912-BS Siesmic Question from NRC
- AR 2249011; Phoenix Alignment Did Not Match Actual Plant
- Clearance Coversheets; 0 SW SW-2912-BS MM; Revision 4, and OPS; Revision 7

- Clearance Tag Lists; 0 SW SW-2912-BS MM; Revision 4, and OPS; Revision 7
- MA-AA-100-1008; Station Housekeeping and Material Control; Revision 17
- NP 10.3.7; On-Line Safety Assessment; Revision 40
- PBN Unit 1 (V. 10) – Historical, Plant Configuration Reports; 02/05/2018, 02/19/2018, 02/21/2018, and 02/22/2018
- PBN Unit 1 (V. 10) – Historical, Risk Data Reports; 01/16/2018, 02/05/2018–02/07/2018, and 02/09/2018–02/10/2018
- PBN Units 1 and 2 (V. 10) Current Risk Summary Reports; 01/15/2018, 02/05/2018, 02/06/2018, 02/08/2018, 02/12/2018, 02/14/2018, 02/15/2018, 02/16/2018, 02/19/2018, and 02/22/2018
- PBN Unit 2 (V. 10) – Historical, Risk Data Reports; 01/16/2018, 02/09/2018, and 02/12/2018–02/17/2018
- PBN Unit 2 (V. 10) – Historical, Plant Configuration Reports; 01/16/2018, and 02/09/2018
- Station Logs; 01/16/2018–01/17/2018; 02/05/2018–02/07/2018, 02/09/2018–02/10/2018; and 02/12/2018–02/24/2018

71111.15—Operability Determinations and Functionality Assessments

- AR 2242513; Steam Leak on 2MS-235B Second Off Isolation
- AR 2242524; 2MS-235A: Valve Leaks By
- AR 2243105; Abnormal Trend – 2TE-3270, W-1B1 Accident Fan Exit Temperature
- AR 2245794; Carbon Steel Valve Installed
- AR 2252240; Tornado Missile Protection
- AR 2254013; Pinhole SW Leak in Casting of Body
- AR 2256282; Elevated G-03 Lube Oil Temperature
- DBD-29; Auxiliary Building and Control Building HVAC; Revision 7
- Drawing 6090F02501, Sheet 3; Engine Control for G03(G04); Revision 8
- Drawing 6090F02501, Sheet 6; Engine Control (AC Accessory Equipment Wiring) for G03(G04); Revision 7
- Drawing 6704-C-323107; 480V MCC 1B-40 (2B-40) EDG Jacket Water IMRS Heater HX-267A (HX-267B); Revision 7
- Narrative Logs dated March 1, 2018 and March 8, 2018
- WO 40484201-01; 1 ST-02381 / Replace Steam Trap with Steamgard Unit

71111.18—Plant Modifications

- AR 2126370; Track Administrative Open Items for EC 285583 SFPHY Replace
- AR 2211767; EC 286412 – OPS Training on SFP Temporary Cooling System
- AR 2234880; Halon Modification Incorrect Background/Scope (PWE)
- AR 2235019; EC285583 Did Not Adequately Address Load Incr. to 2B32 (PWE)
- AR 2243876; Procedure AOP-40F Incorrectly Removed Note in Procedure
- AR 2249521; Contingency SFP Cooling Work Plan – Error Identified
- AR Search Report; Modification; 11/01/2017–02/14/2018
- Drawing M-210, Sheet 1; Plant Make-up Water Treatment System Pretreatment System
- EC286412; Facility and Unit: PBO; Revision 3
- PBF-2015; Operations Notebook; Revision 11; Subject: Temp SFP Cooling; Placed in Notebook on 01/12/2018
- TR-AA-230-1000-F06; Just-In-Time Training/Document Based Instruction Guide (DBGI); Revision 0; Title: SFP HX T-Mod EC 286412; Completed on 01/11/2018
- WO 40524006-20; T-Mod for Temp Cooling of Spentfuel Pool, EC-286412

71111.19—Post Maintenance Testing

- 0-PT-FP-002; Diesel Engine Driven Fire Pump Functional Test; Revision 21; Completed on 02/22/2018
- 0-PT-FP-002; Weekly Diesel Engine-Driven Fire Pump Functional Test; Revision 14
- AR 2239898; Unexpected Alarms Received During PC 77 Part 6 Testing
- AR 2240928; Heater HX-600D Failed to Operate During PMT
- AR 2241485; Heater HX-600F Failure During PMT (PWE)
- AR 2244623; D-107 POT PMT Not Adequate Due to WO Scheduling Changes
- AR 2246069; 1st PMT Not Performed on SW-2819
- AR 2249497; New STL01/STL02 G02 Relay Timing Out of Spec After Install
- AR 2249566; WR for Additional Relay Functional Testing
- AR 2249645; Timing of Relay STL01 Did Not Meet Acceptance Criteria
- AR 2250063; No Oil Observed During Start of G-02 EDG
- AR 2250065; G-02: G2H Vibration Reading Step Change
- AR 2250272; Corrosion Identified on P-035B-E Fuel Oil Lines
- AR 2251401; D-106 Cell 20 Found at 2.08 VDC
- AR 2253825; SW-LW-62 Continued to Cycle When Energized
- AR 2253944; PMT Not Specified for Spent Fuel Pool Service Water MOVs
- AR QA Record; AR 1987688; DNA – Re-Evaluate Potential Unmonitored Release Path; Completed on 10/19/2014
- AR QA Record; AR 2247339; Test Equipment Paused Test; Completed 02/21/2018
- AR Search Report; 0-PT-FP-002; 03/01/2014–12/27/2015
- AR Search Report; PMT; 12/01/2017–03/30/2018
- AR Search Report; Post Maintenance Test; 12/01/2017–03/30/2018
- Drawing 110E163, Sheet 12B; Engineered Safety Features (ESF) Systems Train “B” Reactor Safeguards Systems; Revision 21
- Drawing 110E163, Sheet 7B; Engineered Safety Features (ESF) Systems Train “B” Reactor Safeguards Systems; Revision 19
- Drawing 12137 ESK-11A; 120V. A.C. Misc. CKTS. Sh.1 Solenoid Operated Valves; Revision 21
- Drawing 6118 E-94, Sheet 14I; Diesel Generator G-02 Electrical Control Cabinet C-35; Revision 7
- Drawing 6118 E-94, Sheet 15C; Diesel Generator G-02 Engine Control Cabinet C-65 Relay Connection Diagram; Revision 4
- Drawing 8413730, Sheet 21; Diesel Generator G02 DC Control; Revision 9
- Drawing 8413730, Sheet 22; Diesel Generator G02 Start No. 1 Circuitry; Revision 12
- Drawing 8413730, Sheet 23; Diesel Generator G02 Start No. 2 Circuitry; Revision 11
- Drawing 8413730, Sheet 28; Diesel Generator G02 Miscellaneous; Revision 8
- Drawing M-207, Sheet 1; Service Water; Revision 89
- Drawing M-207, Sheet 3; Service Water; Revision 71
- Drawing M-207, Sheet 3; Service Water; Revision 73
- Drawing M-217, Sheet 2; Auxiliary Feedwater System; Revision 38
- Drawing M-2207, Sheet 2; Service Water System; Revision 19
- EN-AA-100-1004-F01; Calculation Cover Sheet; Revision 0; Title: D106 DC System Sizing, Voltage Drop and Short Circuit Calculation; Completed 08/12/2014
- EN-AA-100-1004-F01; Calculation Cover Sheet; Revision 0; Title: Battery Charger Sizing and Current Limit Set Points; Completed 01/04/2018
- EN-AA-100-1004-F01; Calculation Coversheet; Service Water Model Input; Completed on 03/15/2018

- EN-AA-203-1001-F01; 10 CFR Applicability Determination Form; PCR ; Completed on 06/15/2015
- EN-AA-203-1001-F03; Past Operability / Functionality Review (POR) Form; AR 2250272; Completed on 03/01/2018
- ICP 06.086A; Train A Standby Steam Generator Pump and Auxiliary Feedwater Instrumentation Calibration; Revision 14
- IT 21; Charging Pumps and Check Valve Test (Quarterly) Unit 1, Revision 25; Completed on 02/22/2018
- IT 72; Service Water Valves (Quarterly); Revision 39; Completed 03/14/2018
- NDE-753; Visual Examination (VT-2) Leakage Detection of Nuclear Power Plant Components; Revision 18
- OLM Plan; G-02 Emergency Diesel Generator 2 yr. Maintenance PM's – WW1806; Revision 3
- PB Online Project; PB – FRAG 1P-2B Charging Pump; 02/20/2018
- PB Online Project; PB – FRAG P-35B Diesel Fire Pump; 02/20/2018
- PBF-1515c; 10 CFR 50.59/72.48 Screening; EC 259770 – NRC Order Fukushima FLEX Diesel Fire Pump Replacement / SW-Tie NRC 2013-0024 Letter, NRC Order EA-12-049; 06/05/2015
- PBNP Inservice Testing Background Valve Data Sheet; 1HX-150/2HX-150/HX-142/143 Outlet Temp Control Valve; 12/11/2009; Revision 0
- PBNP Inservice Testing Background Valve Data Sheet; MDAFWP P-38A Discharge Pressure Control Valve; 12/11/2009; Revision 0
- PC 10 Part 3; SW to SFP MOVs and Radwaste System AOVs Leak Check; Revision 10; Completed on 03/14/2018
- Reference Use Work Order; WO 40488213; G-02 Emergency Diesel Generator; Revision 0
- Reference Use Work Order; WO 40488213-02; G-02 Emergency Diesel Generator; 11/30/2017
- Station Logs; 03/20/2018–03/21/2018
- STPT 19.2; Emergency Diesel: Generator G-02 General Instrumentation; Revision 8
- WO 00396875-01; VNDG-04176-M / Replace Broken Motor Energized
- WO 00396875-03; VNDG-04176-M / Replace Broken Motor Energized
- WO 00396875-06; VNDG-04176-M / Replace Broken Motor Energized
- WO 40117743-01; Group C Mechanical Maintenance Items Inspection
- WO 40117743-03; Group C Mechanical Maintenance Items Inspection
- WO 40118217-01; VNDG-4178-M / Leaking Solenoid
- WO 40118217-02; VNDG-4178-M / Leaking Solenoid
- WO 40118217-03; VNDG-4178-M / Leaking Solenoid
- WO 40118217-06; VNDG-4178-M / Leaking Solenoid
- WO 40408516-03; D-106 / Perform Battery Load Test After Cell Replacement
- WO 40443171-21; Ops PMT/RTS & ASME XI Leakage Testing HX-013B
- WO 40443171-25; HX-013B Performance test (SFP Current Low Load) EC285583
- WO 40450376-01; VNDG-04151F / Inconsistent Hardware on Intake
- WO 40450376-02; VNDG-04151F / Inconsistent Hardware on Intake
- WO 40480000-01; 1P-002B-Z / Replace Signal Conditioner Module
- WO 40483879-01; 1P-002B / No PM For Greasing Charging Pump Couplings
- WO 40486400-01; B313B-2B337B: Clean and Inspect Power Panel
- WO 40487217-02; G-02, 4 Year Electrical Maint Items
- WO 40488213-01; G-02 / Replace 13 Square D Time Delay Relays on G-02
- WO 40488213-05; G-02 / Replace 13 D Time Delay Relays on G-02
- WO 40491671-01; and -02; Operator Diaphragm Replacement
- WO 40511073-01; AF-04012-O – Diagnostic Check
- WO 40515677-01; 1P-002B-Z Perform Replacement of Blower Fan and Shaft Brush

- WO 40516802-01; -04, and -05; SW-LW-062 Refurbish Valve Disk to Body Clearance by
- WO 40519880-01; and -03; Inspect/Repair G-02 VNDG Dampers
- WO 40530282-01; SW-04401 Replace Relief Valve – IST Program
- WO 40530282-02; SW-04401 Replace Relief Valve – IST Program
- WO 40530282-04; SW-04401 Replace Relief Valve – IST Program
- WO 40530283-02; DG-03315B, Replace Relief Valve
- WO 40530421-01; P-207A-M Lubricate Coupling
- WO 40530421-02; P-207A-M Lubricate Coupling
- WO 40531452-01; IT-14 FO Transfer System Pumps/Valves for G-02
- WO 40531469-01; TS-82, G-02 Emergency Diesel Generator Operability
- WO 40531778-01; G-02, 2 Year Electrical Maintenance Items
- WO 40531778-03; G-02, 2 Year Electrical Maintenance Items
- WO 40541739-01; P-38A Pump Run on Recirc
- WO 40543018-01; WR To Install EC 288654: Replace Supports for P-35B-E
- WO 40543018-02; WR to Install EC 288654: Replace Supports for P-35B-E
- WO 40543018-09; WR to Install EC 288654: Replace Supports for P-35B-E
- WO 40548395-01; 1P-2B Replace the Seal Between the Gear Reducer and Pump
- WO 40548831-01; 1P-002B Sample and Change Oil
- WO 40549413-01; HX-055B GL 89-13 Open/Inspect/Clean/Close G-02 EDG
- WO 40549413-02; HX-055B GL 89-13 Open/Inspect/Clean/Close G-02 EDG
- WO 40556425-01; F-222 Filter Basket Strainer Handle Broke
- WO 40572876-01; 1CV-283B Visible, White and Orange Colored Boric Acid
- WO 40572876-03; 1CV-283B Visible, White and Orange Colored Boric Acid
- WO 40588229-01; Perform Replacement of D-106 Cell 20
- WO 40588229-03; D-106 / Replace Cell 20 (Contingency)
- WO 40588279-06; Weld Build Up Piping

71111.22—Surveillance Testing

- 2ICP 02.003B; Reactor Protection System Logic Train B 31 Day Surveillance Test; Revision 16
- AR 2248635; Increase in Vertical Vibration Levels on 2P-15A SI Pump
- AR 2248832; NRC SRI Questioned Extension Cord on CCW Piping
- AR 2249084; Procedure Improvement for SI Pump Cap Installation
- IT 02 Train A; High Head Safety Injection Pumps and Valves Train A Unit 2; Revision 9
- IT 06 Train A; Train A Containment Spray Pump and Valves Unit 2; Revision 5
- PCR 2248925; IT 02 Train A - High Head Safety Injection Pumps and Valves; 02/10/2018
- TS 5; Rod Exercise Test Unit 1; Revision 35

71114.06—Drill Evaluation

- Emergency Preparedness 1st Quarter 2018 EP Drill; Revision 0
 - EPIP 2.1 Attachment B; Nuclear Accident Reporting Form (NARS) for NUE; Revision 54
 - EPIP 2.1 Attachment B; Nuclear Accident Reporting Form (NARS) for Alert; Revision 54
 - EPIP 2.1 Attachment B; Nuclear Accident Reporting Form (NARS) for SAE; Revision 54
 - Post-Scenario Review Critique Forms for CR-Sim, TSC/OSC, EOF, JIC, and OSRPF; 01/23/2018
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71124.05—Radiation Monitoring Instrumentation

- HPCAL 1.1; Radiation Protection Instrument Calibration, Repair and Response Checks; Revision 40
- HPCAL 1.31; Maintenance and Calibration of RADECO Model H809V Volume Air Samplers; Revision 9
- HPCAL 1.33; Maintenance and Calibration of Low Volume Air Samplers; Revision 18
- HPCAL 1.38; Calibration of the Portable Neutron Survey Instrument Analog Smart Portable (ASP-1); Revision 10
- HPCAL 1.49; Calibration of Portable Dose Rate Instruments; Revision 9
- HPCAL 1.55; Calibration of the Ludlum Model 12-4 Portable Neutron Survey Meter; Revision 4
- HPCAL 2.8.1; Personal Contamination Monitor Detector Efficiency Determination; Revision 13
- Point Beach Nuclear Plant; Calibration Data Sheet; Canberra GEM, S/N 1101-008; 04/03/2017
- Point Beach Nuclear Plant; Calibration Data Sheet; Canberra GEM, S/N 1101-009; 07/19/2017
- Point Beach Nuclear Plant; Calibration Data Sheet; Eberline AMS-4, S/N 482797; 09/06/2017
- Point Beach Nuclear Plant; Calibration Data Sheet; Eberline AMS-4, S/N 463221; 06/29/2017
- Point Beach Nuclear Plant; Canberra Argos 5AB Calibration Worksheet – Beta; 05/03/2017
- Point Beach Nuclear Plant; Canberra Argos 5AB Calibration Worksheet – Beta; 04/13/2017
- Point Beach Nuclear Plant; High Volume Air Sampler Maintenance and Calibration Record, Sampler Number 330815-1, 330836-22; 07/26/2017
- Point Beach Nuclear Plant; High Volume Air Sampler Maintenance and Calibration Record, Sampler Number 330940; 03/23/2017

71151—Performance Indicator Verification

- Performance Indicators; Units 1 And 2; Unplanned Power Changes Per 7000 Critical Hours; 01/01/2017–12/31/2017
- Performance Indicators; Units 1 And 2; Unplanned Scrams Per 7000 Critical Hours; 01/01/2017–12/31/2017
- Performance Indicators; Units 1 And 2; Unplanned Scrams with Complications (USwC); 01/01/2017–12/31/2017
- Point Beach PI Reporting Data; Units 1 And 2; 01/01/2017–12/31/2017 For Unplanned Power Changes Per 7,000 Critical Hours
- Point Beach PI Reporting Data; Units 1 And 2; 01/01/2017–12/31/2017 For Unplanned Scrams Per 7,000 Critical Hours
- Point Beach PI Reporting Data; Units 1 And 2; 01/01/2017–12/31/2017 For Unplanned Scrams with Complications Per 7,000 Critical Hours

71152—Problem Identification and Resolution

- AR 2246485; Potential Work Hour Rule Violation in DZ Projects
- AR 2254843; IA-1917, 1924, 1925 Valves with AL Handles in U1 Containment
- AR 2255841; Discrepancies in Unit 1 Aluminum Inventory
- Engineering Change 10802 (Engineering Evaluation 207-0001); Unit 1 Aluminum Inventory; Revision 0

71153—Follow-Up of Events and Notices of Enforcement Discretion

- AR 02229430; 1CV-309B Downstream Weld
- AR 02233500; Made Mode Change With Inoperable TDAFW
- AR 02233550; 1CV-309B Boric Acid Indication at Downstream Weld

- AR 02245648; LER 2017-001-00 (Door-61) Text Submission Error
- AR 02248575; TRM 3.4.3, Primary System Integrity Cancellation/Deletion
- AR 2225525; Door-061 South CR Door Stuck Open
- AR-02248499; Licensee Event Report 2017-003-00 Closure Review Performance Deficiency
- EN-AA-100; Design Control Program; Revision 6
- Event Notification 53042 - PBNP Event Notification Worksheet; Degraded Condition; 10/30/2017
- Licensee Event Report 05000266/2017-002-00; Operation or Condition Prohibited by Technical Specifications; 12/13/2017
- Licensee Event Report 05000266/2017-003-00; Degraded Condition; 12/13/2017
- MA-AA-201; Minor Maintenance Process; Revision 12
- MA-AA-201; Minor Maintenance Process; Revision 2
- NP 7.4.3; Post Maintenance NDE Requirements for Power Piping; Revision 16
- PBNP Visible Liquid Penetrant Examination Record; 1CV-309B Downstream Weld; 10/12/2017
- SCR 2002-0465; TRM 3.4.3 Cancellation-Removal of NDE and RCS Leak Test Requirements from the TRM; 04/08/2003.
- WO 40473208-24; 1CV-309B Perform PT of Weld Area
- WO 40568535-01; 1CV-309B Boric Acid at Downstream Weld – Replace Section of Tubing
- WO 40568535-07; 1CV-309B Boric Acid at Downstream Weld – 1CV-309B Operations PMT